

**ABSTRACT OF THE INVENTION**

The invention relates to a process gas for use during laser welding of nonferrous metallic workpieces with a laser beam focussed onto the workpiece to be welded and a laser diode as the laser beam source. According to the invention, the process gas contains at least carbon dioxide and/or oxygen. The process gas can, in addition to carbon dioxide and/or oxygen, also contain argon, nitrogen, helium and/or other precious gases.